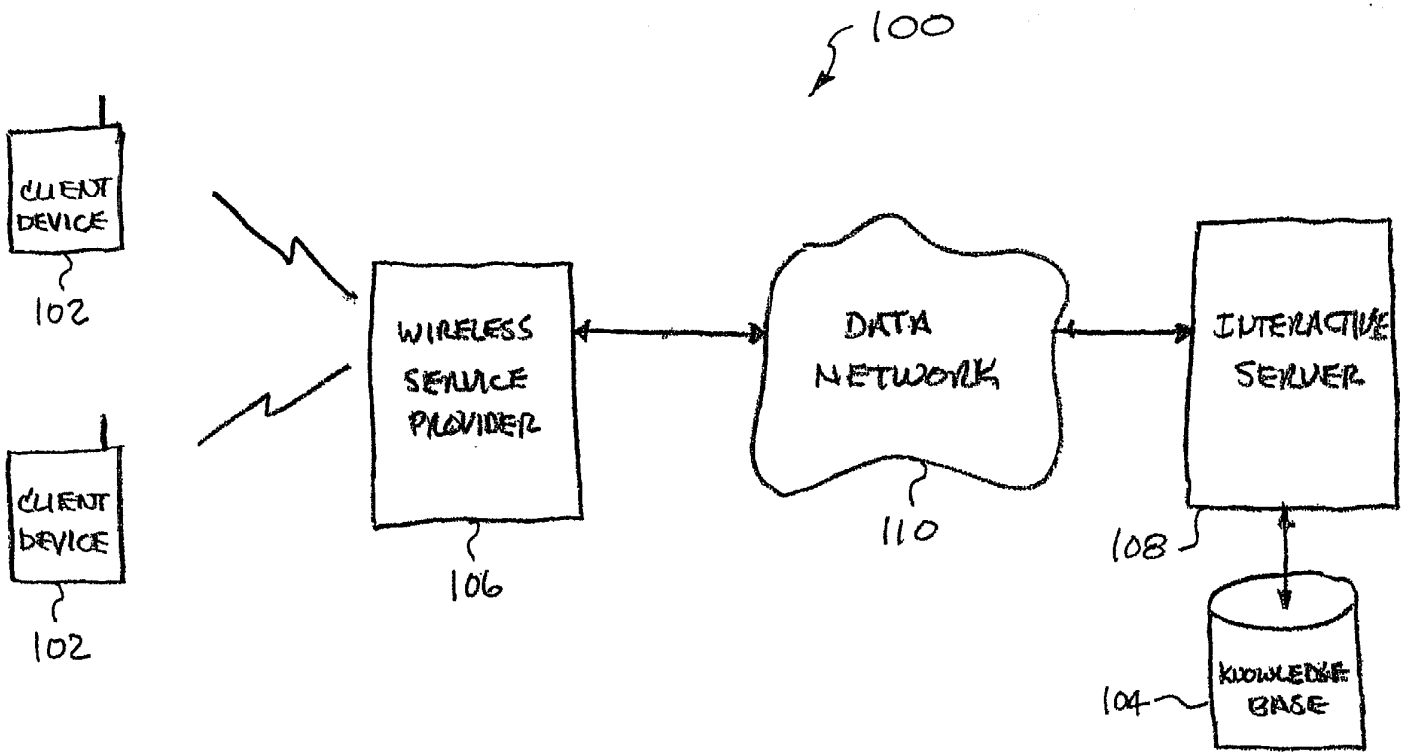
100
CLIENT DEVICE
102
CLIENT DEVICE
102
WIRELESS SERVICE PROVIDER
106
DATA NETWORK
110
INTERACTIVE SERVER
108
KNOWLEDGE BASE
104

FIG. 1

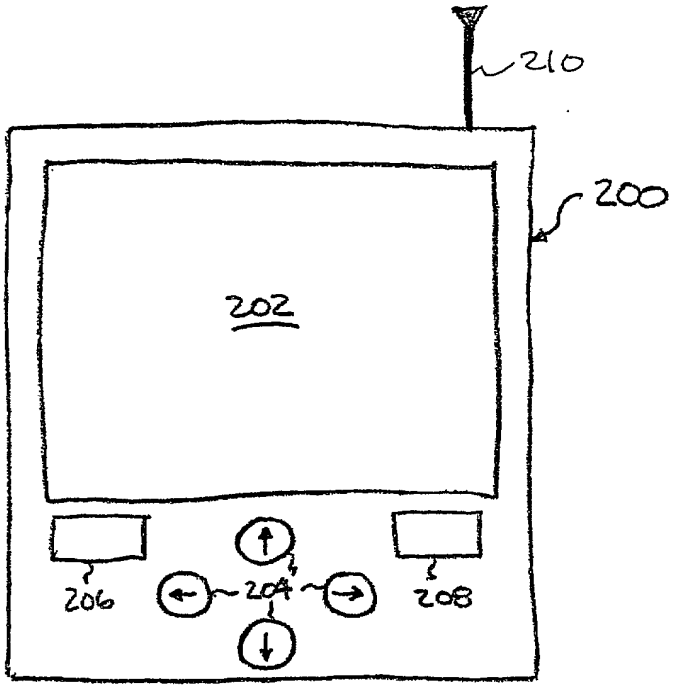


FIG. 2A

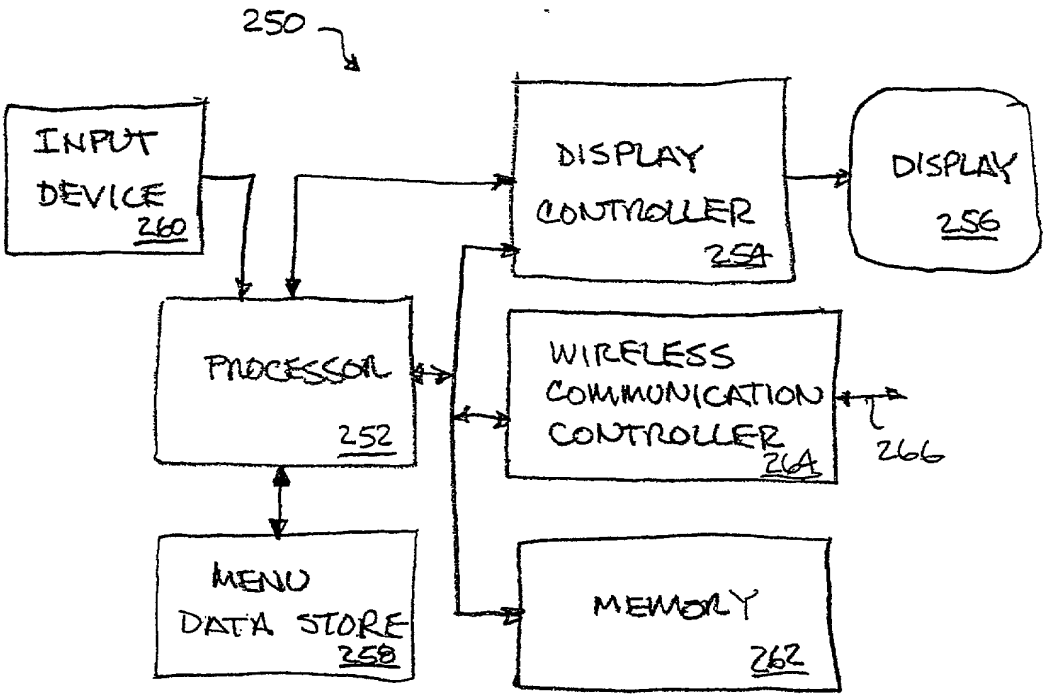
250
INPUT DEVICE 260
DISPLAY CONTROLLER 254
DISPLAY 256
PROCESSOR 252
WIRELESS COMMUNICATION CONTROLLER 264
266
MENU DATA STORE 258
MEMORY 262

FIG. 2B

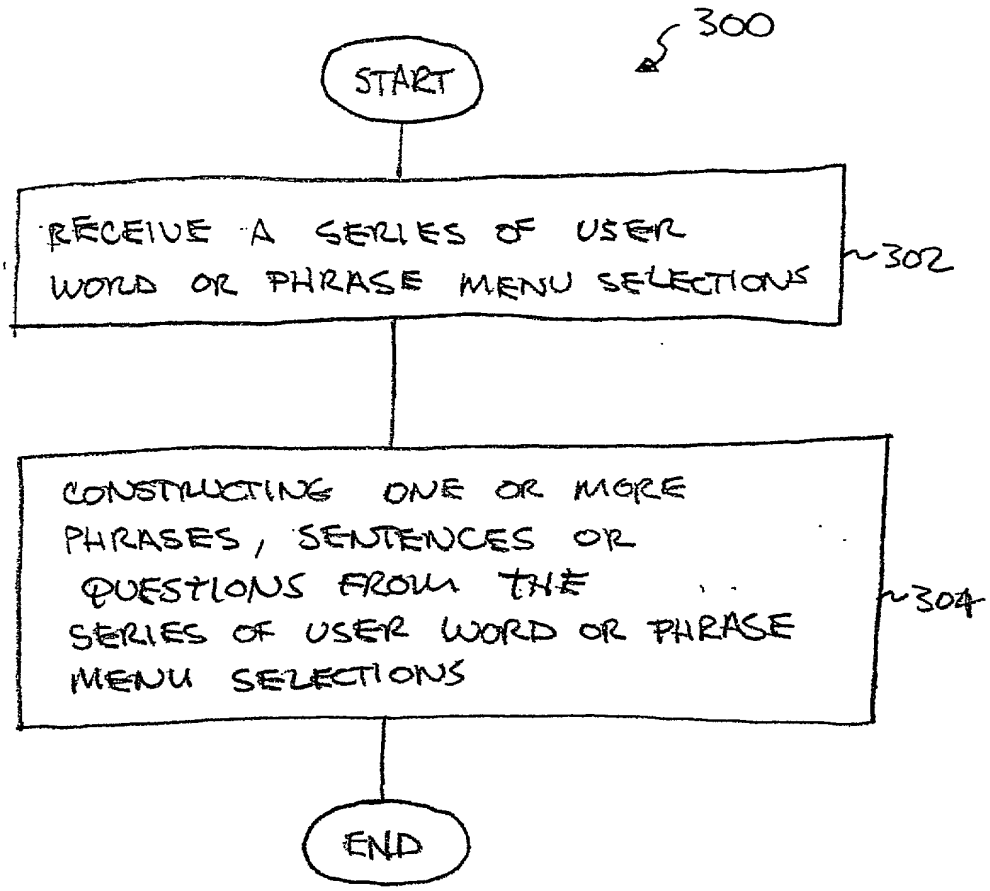
300
START
RECEIVE A SERIES OF USER WORD OR PHRASE MENU SELECTIONS
302
CONSTRUCTING ONE OR MORE PHRASES, SENTENCES OR QUESTIONS FROM THE SERIES OF USER WORD OR PHRASE MENU SELECTIONS
304
END

FIG. 3A

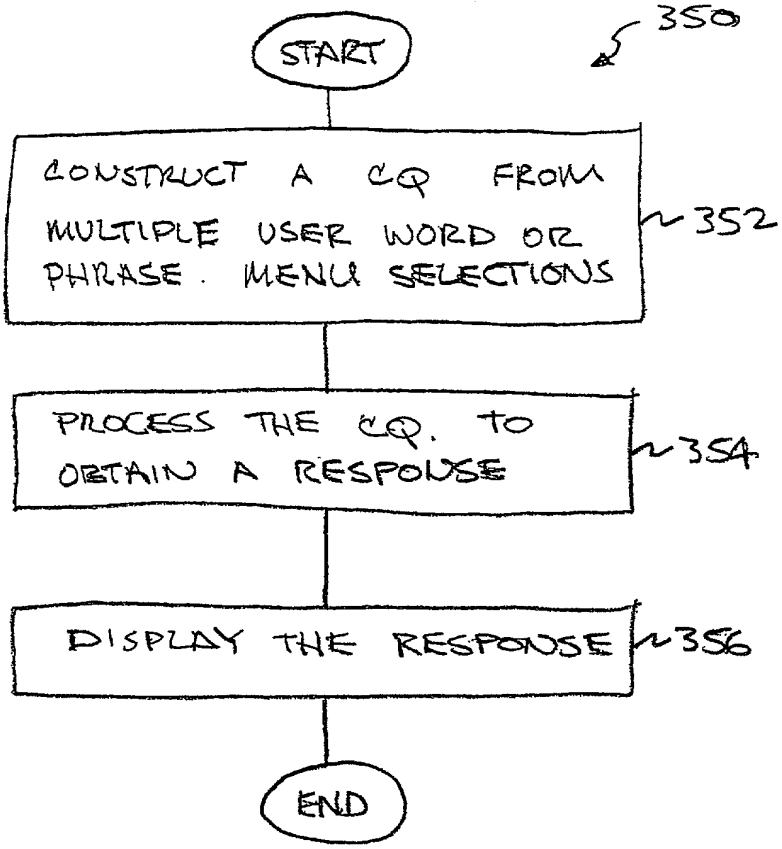
START
350
CONSTRUCT A CQ FROM MULTIPLE USER WORD OR PHRASE. MENU SELECTIONS
352
PROCESS THE CQ. TO OBTAIN A RESPONSE
354
DISPLAY THE RESPONSE
356
END

FIG. 3B

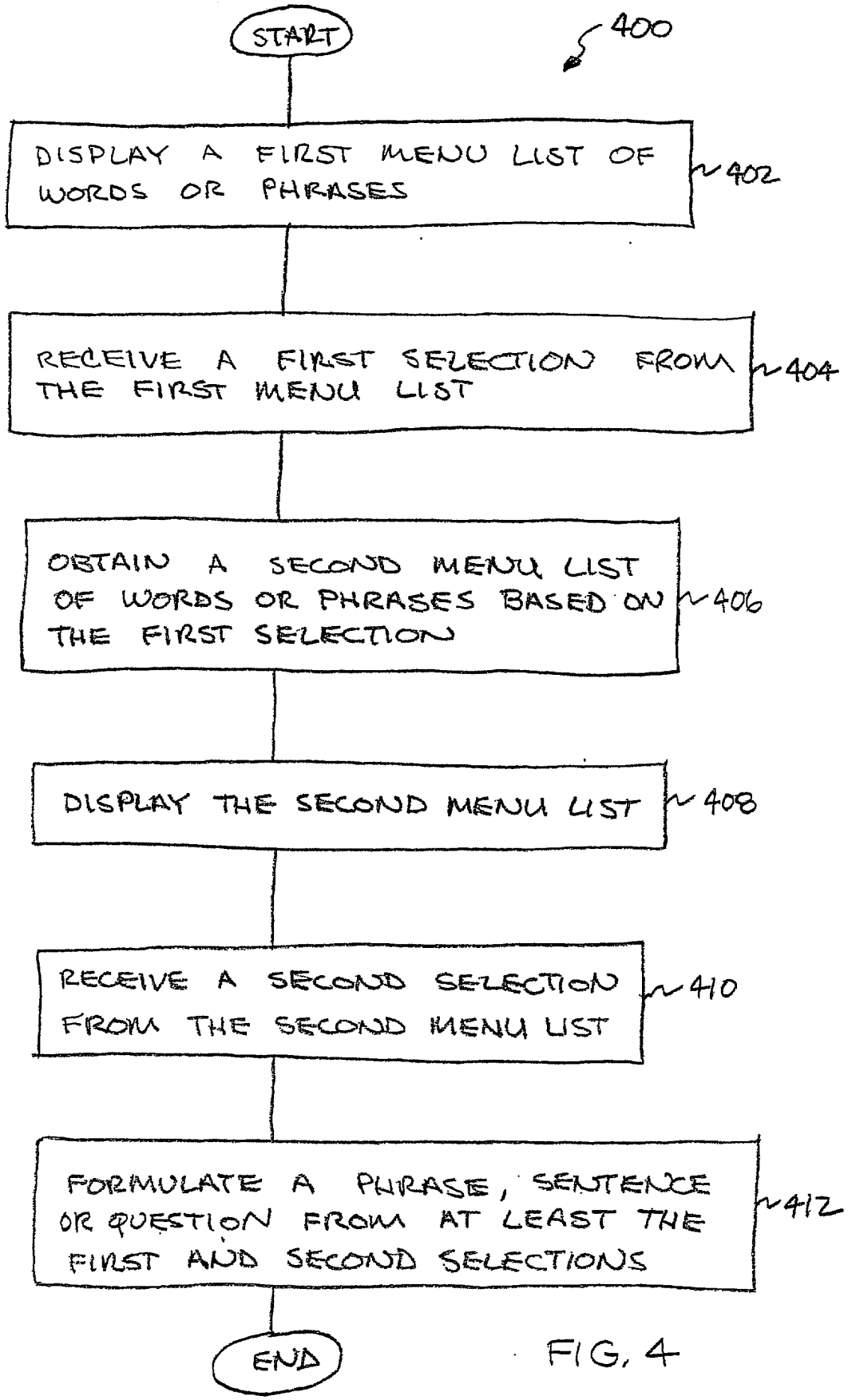
START
400
DISPLAY A FIRST MENU LIST OF WORDS OR PHRASES
402
RECEIVE A FIRST SELECTION FROM THE FIRST MENU LIST
404
OBTAIN A SECOND MENU LIST OF WORDS OR PHRASES BASED ON THE FIRST SELECTION
406
DISPLAY THE SECOND MENU LIST
408
RECEIVE A SECOND SELECTION FROM THE SECOND MENU LIST
410
FORMULATE A PHRASE, SENTENCE OR QUESTION FROM AT LEAST THE FIRST AND SECOND SELECTIONS
412
END

FIG. 4

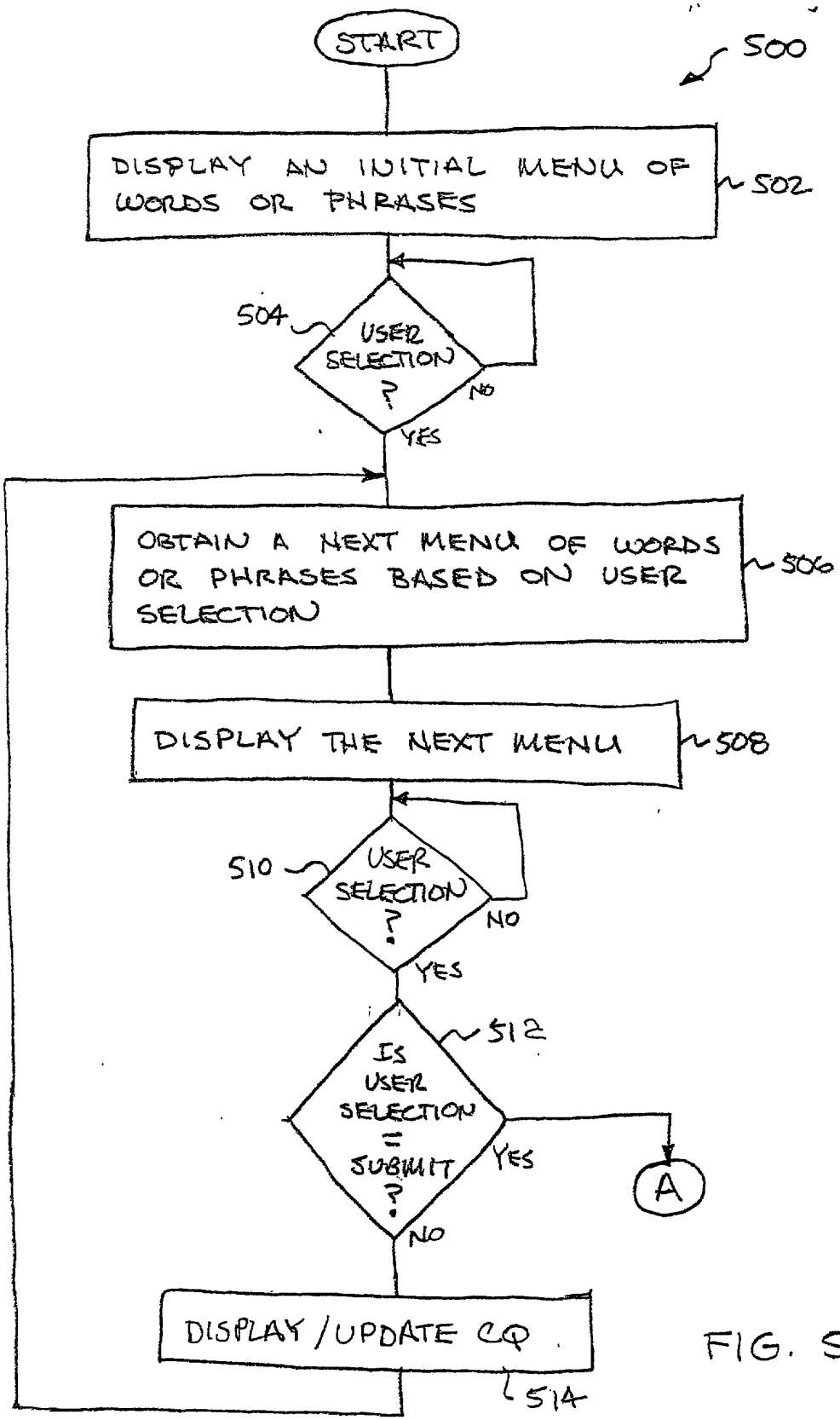
START
500
DISPLAY AN INITIAL MENU OF WORDS OR PHRASES
502
504
USER SELECTION ?
NO
YES
OBTAIN A NEXT MENU OF WORDS OR PHRASES BASED ON USER SELECTION
506
DISPLAY THE NEXT MENU
508
510
USER SELECTION ?
NO
YES
512
IS USER SELECTION = SUBMIT ?
YES
NO
A
DISPLAY / UPDATE CQ
514

FIG. 5A

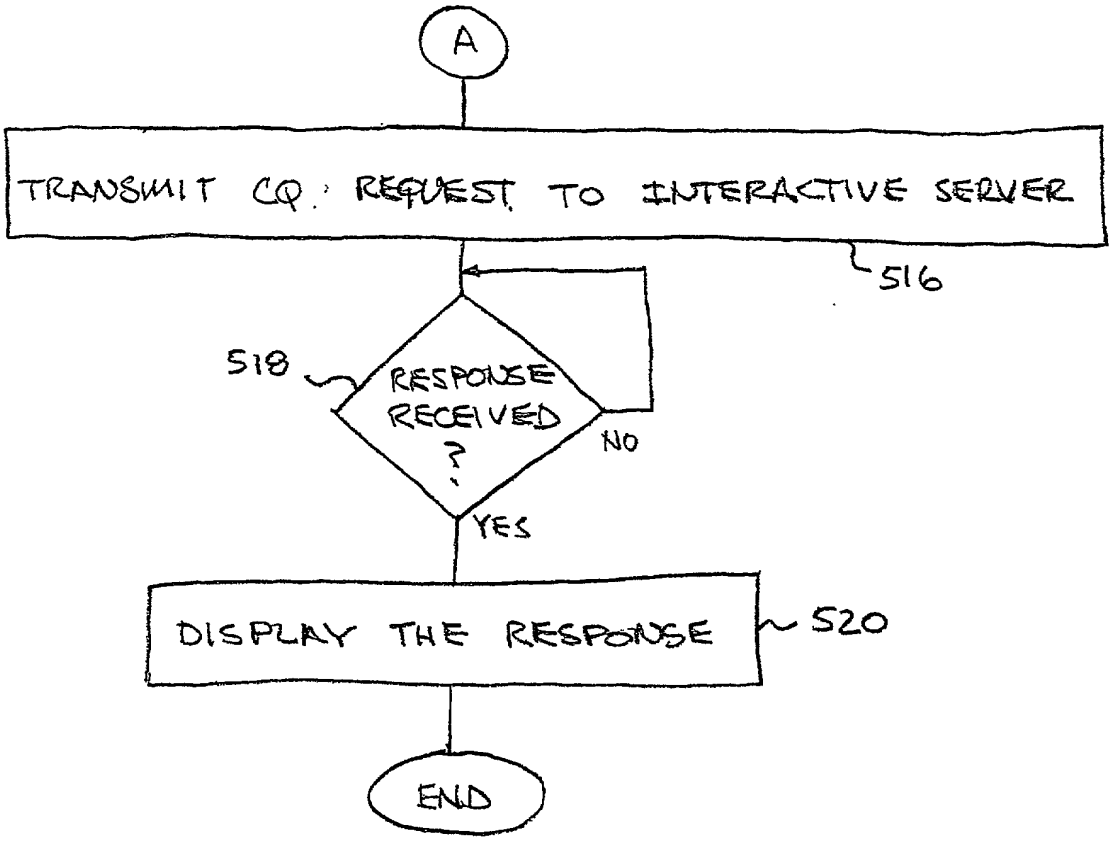
A
TRANSMIT CQ REQUEST TO INTERACTIVE SERVER
516
518
RESPONSE RECEIVED ?
NO
YES
DISPLAY THE RESPONSE
520
END

FIG. 5B

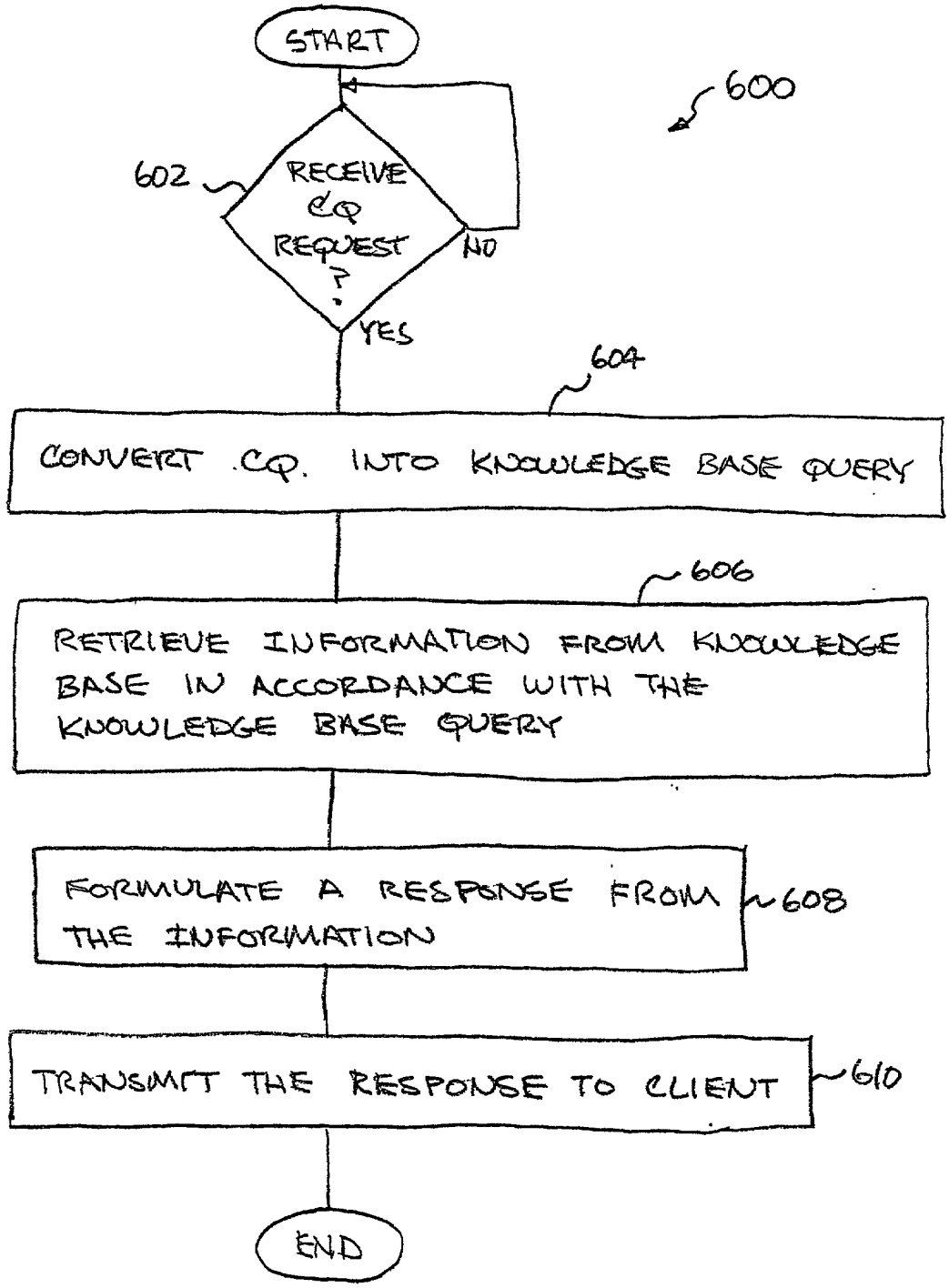
START
600
602
RECEIVE CQ REQUEST ?
NO
YES
604
CONVERT CQ. INTO KNOWLEDGE BASE QUERY
606
RETRIEVE INFORMATION FROM KNOWLEDGE BASE IN ACCORDANCE WITH THE KNOWLEDGE BASE QUERY
FORMULATE A RESPONSE FROM THE INFORMATION
608
TRANSMIT THE RESPONSE TO CLIENT
610
END

FIG. 6

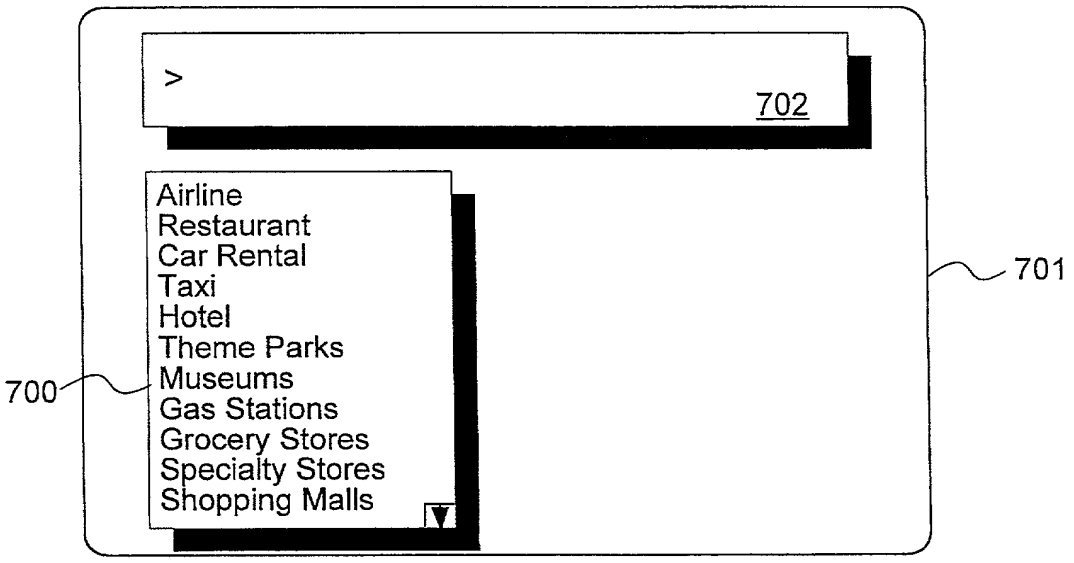
>
702
Airline
Restaurant
Car Rental
Taxi
Hotel
Theme Parks
Museums
Gas Stations
Grocery Stores
Specialty Stores
Shopping Malls
700
701

FIG. 7A

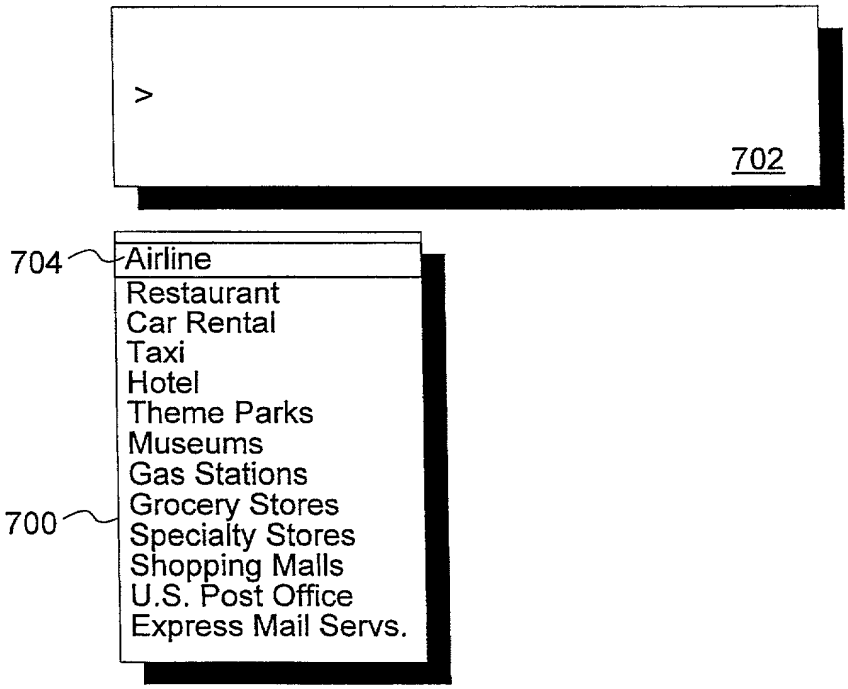
>
702
704
Airline
Restaurant
Car Rental
Taxi
Hotel
Theme Parks
Museums
Gas Stations
Grocery Stores
Specialty Stores
Shopping Malls
U.S. Post Office
Express Mail Servs.
700

FIG. 7B

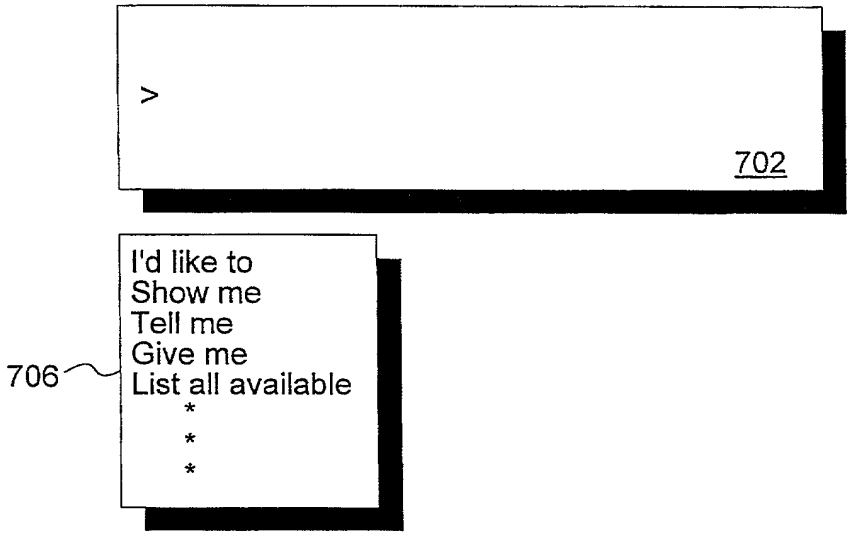
>
702
I'd like to
Show me
Tell me
Give me
List all available
*
*
*
706

FIG. 7C

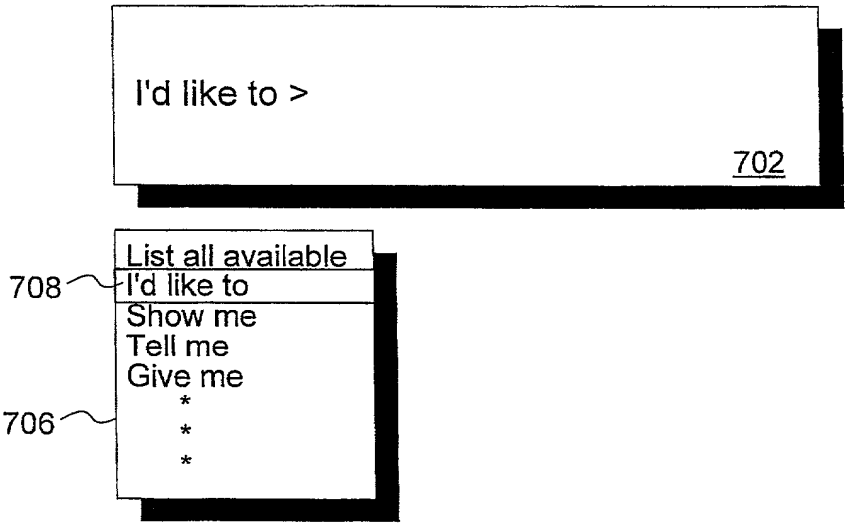
I'd like to >
702
List all available
I'd like to
Show me
Tell me
Give me
*
*
*
708
706

FIG. 7D

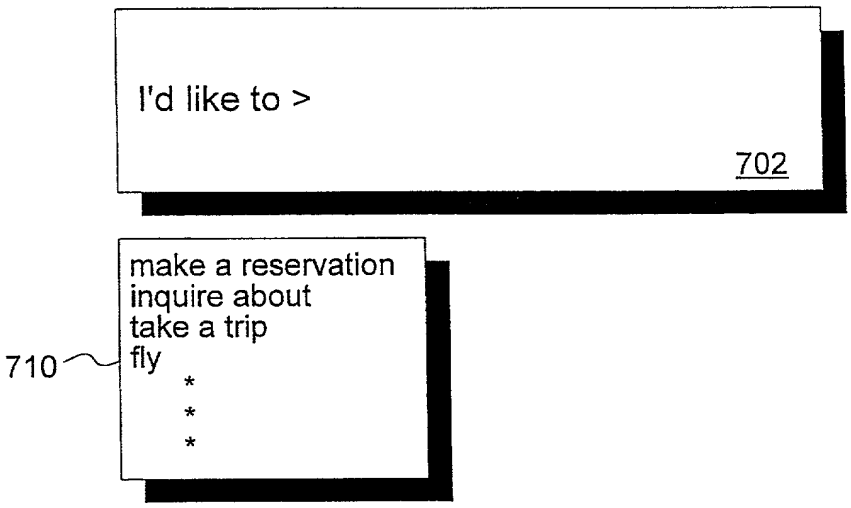
I'd like to >
702
make a reservation
inquire about
take a trip
fly
*
*
*
710

FIG. 7E

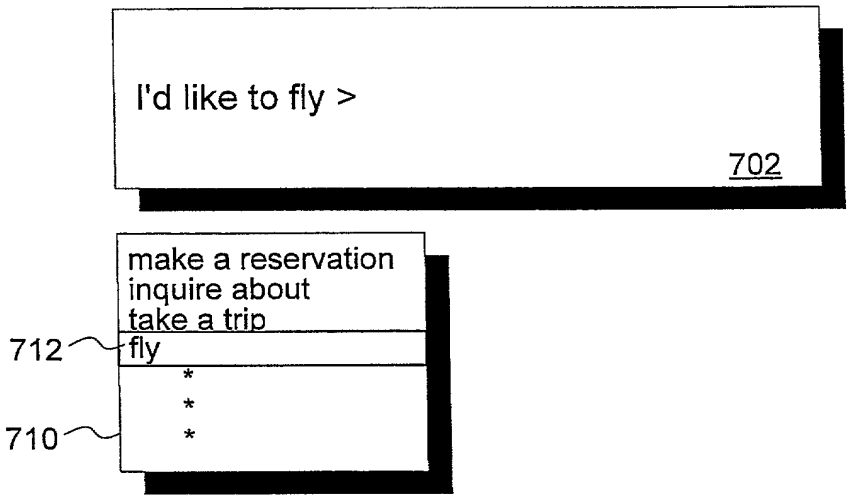
I'd like to fly >
702
make a reservation
inquire about
take a trip
fly
*
*
*
712
710

FIG. 7F

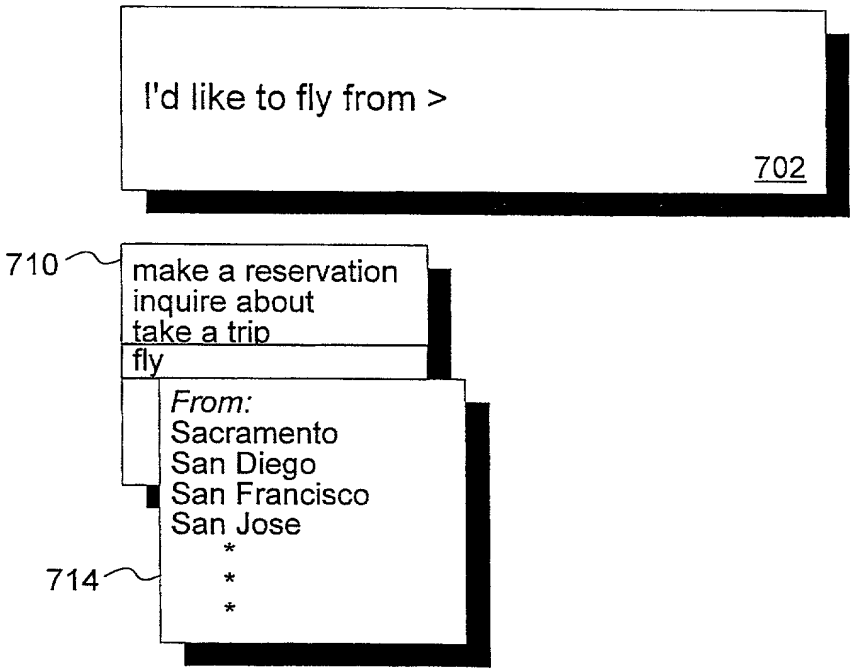
I'd like to fly from >
702
710
make a reservation
inquire about
take a trip
fly
From:
Sacramento
San Diego
San Francisco
San Jose
*
*
*
714

FIG. 7G

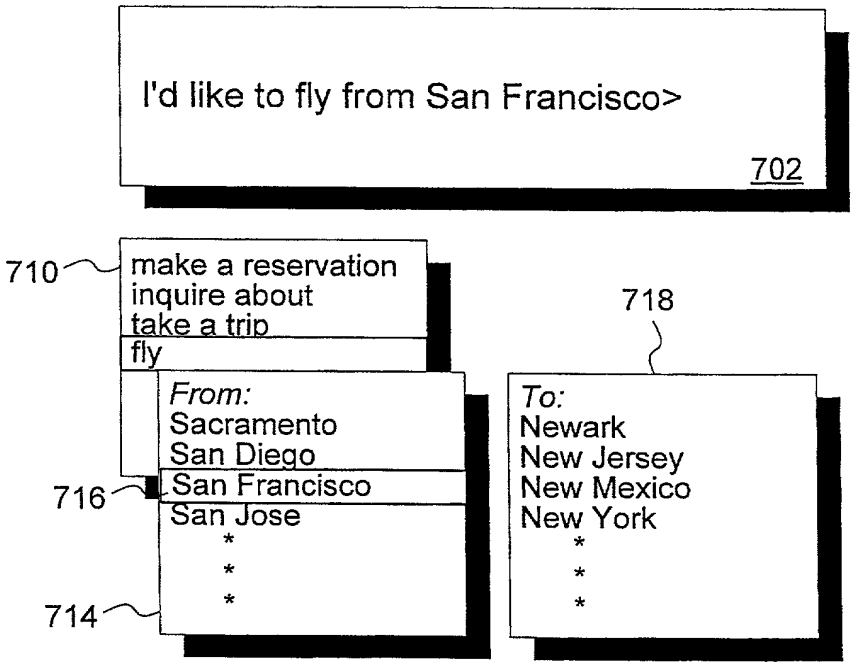
I'd like to fly from San Francisco>
702
710
make a reservation
inquire about
take a trip
fly
From:
Sacramento
San Diego
San Francisco
San Jose
*
*
*
716
714
718
To:
Newark
New Jersey
New Mexico
New York
*
*
*

FIG. 7H

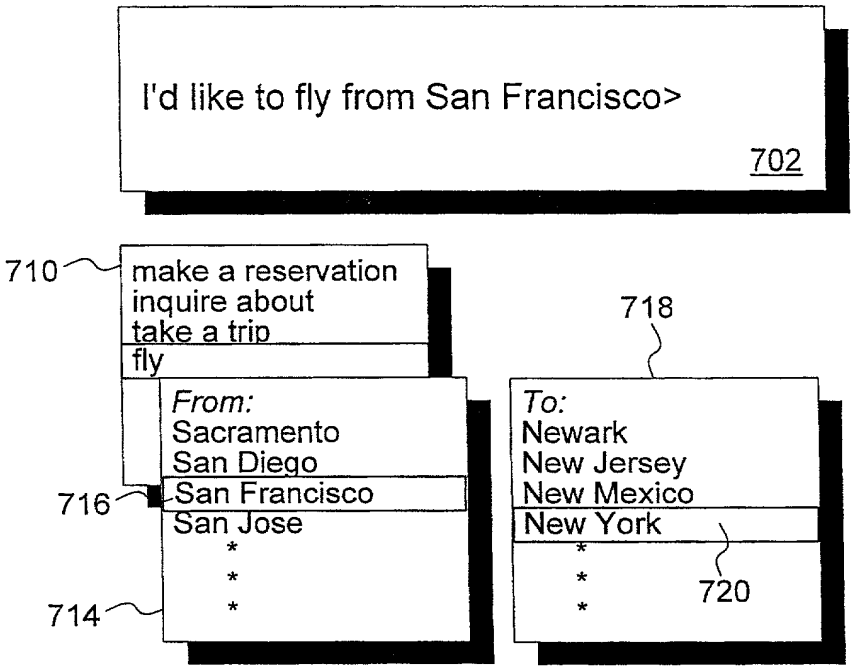
I'd like to fly from San Francisco>
702
710
make a reservation
inquire about
take a trip
fly
From:
Sacramento
San Diego
San Francisco
San Jose
716
714
718
To:
Newark
New Jersey
New Mexico
New York
720

FIG. 7I

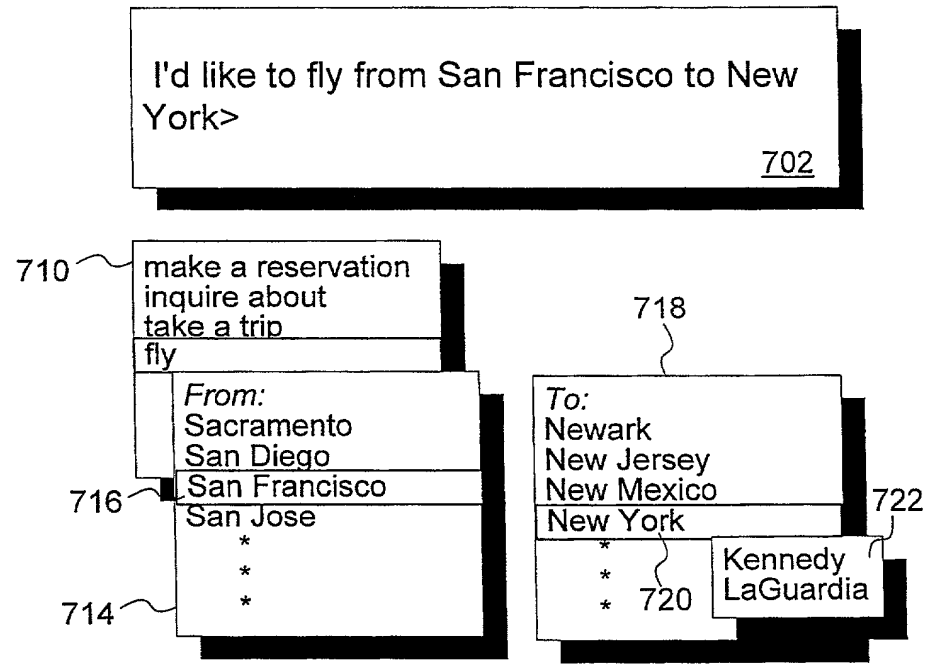
I'd like to fly from San Francisco to New York>
702
710
make a reservation
inquire about
take a trip
fly
From:
Sacramento
San Diego
San Francisco
San Jose
716
714
718
To:
Newark
New Jersey
New Mexico
New York
720
722
Kennedy
LaGuardia

FIG. 7J

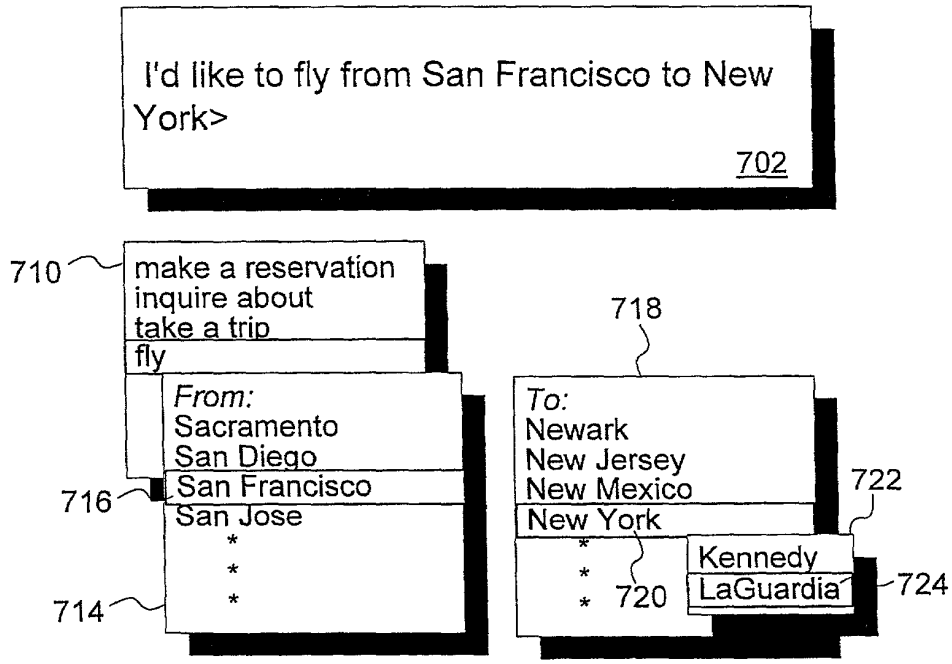
I'd like to fly from San Francisco to New York>
702
710
make a reservation
inquire about
take a trip
fly
From:
Sacramento
San Diego
San Francisco
San Jose
716
714
718
To:
Newark
New Jersey
New Mexico
New York
722
Kennedy
LaGuardia
724
720

FIG. 7K

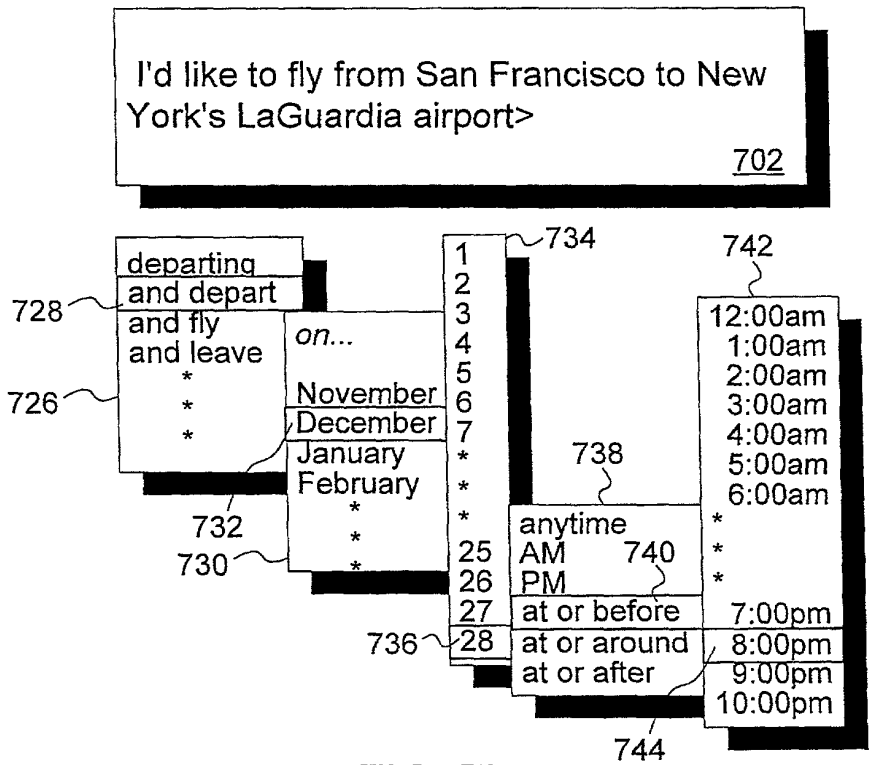
I'd like to fly from San Francisco to New York's LaGuardia airport>
702
departing
and depart
and fly
and leave
728
726
on...
November
December
January
February
732
730
734
1
2
3
4
5
6
7
25
26
27
28
736
738
anytime
AM
PM
740
at or before
at or around
at or after
742
12:00am
1:00am
2:00am
3:00am
4:00am
5:00am
6:00am
7:00pm
8:00pm
9:00pm
10:00pm
744

FIG. 7L

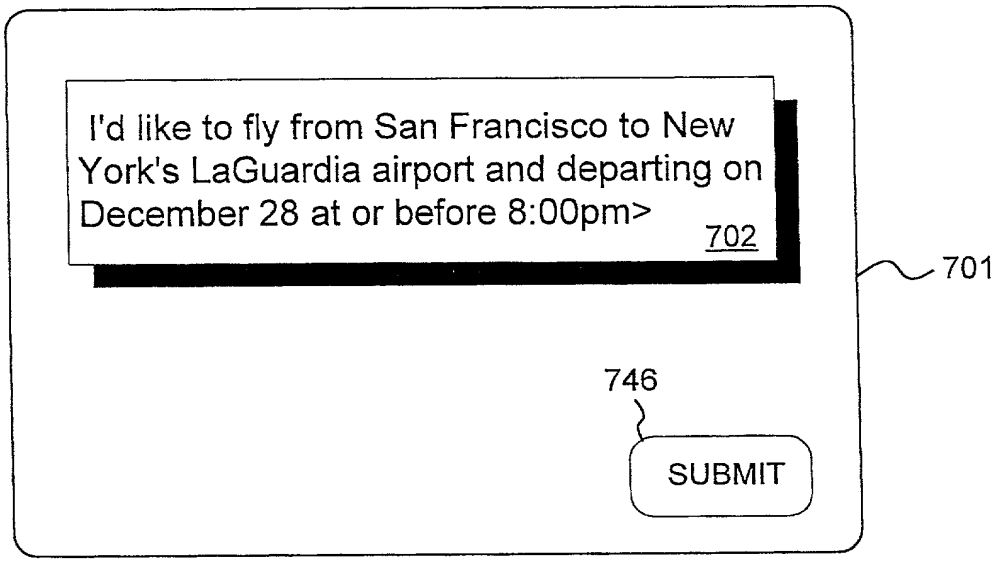
I'd like to fly from San Francisco to New York's LaGuardia airport and departing on December 28 at or before 8:00pm>
702
701
746
SUBMIT

FIG. 7M

PUBLIC PERSONAL

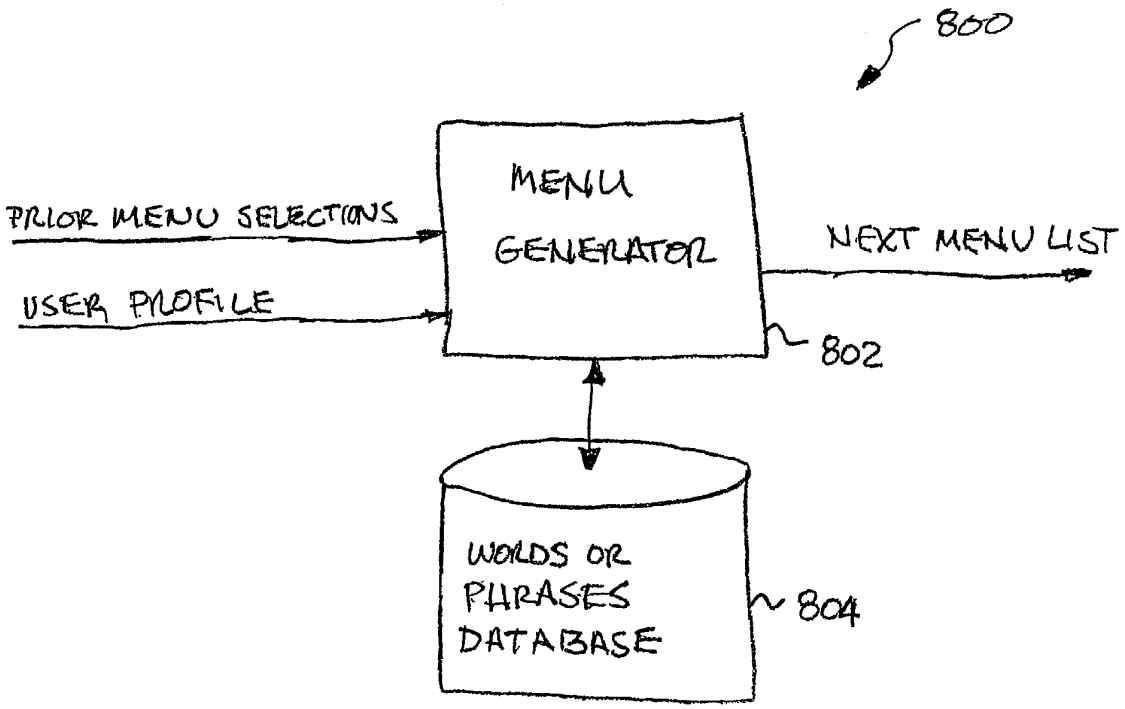


FIG. 8

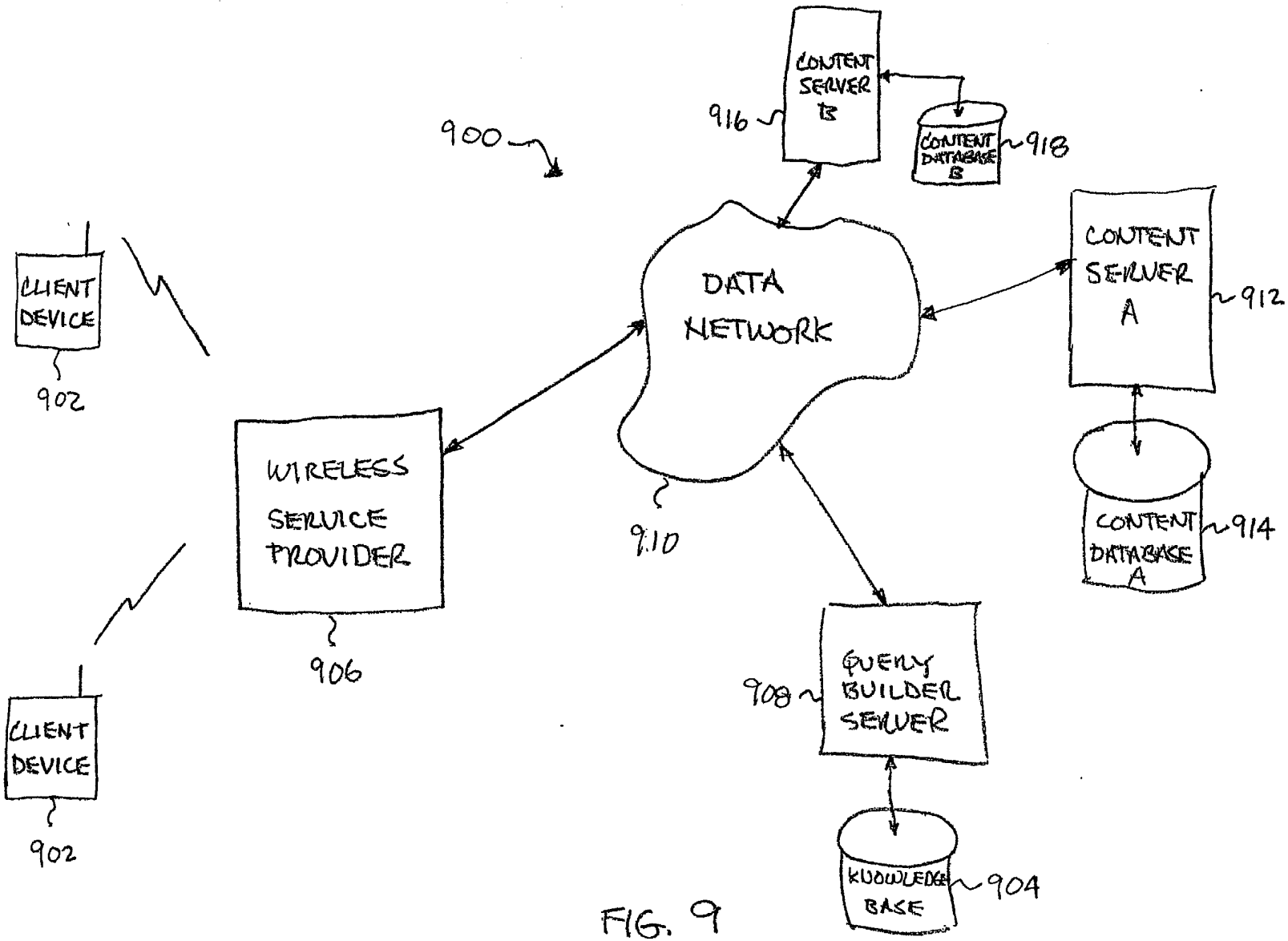
900
CONTENT SERVER B
916
CONTENT DATABASE B
918
CONTENT SERVER A
912
DATA NETWORK
910
CONTENT DATABASE A
914
CLIENT DEVICE
902
WIRELESS SERVICE PROVIDER
906
CLIENT DEVICE
902
QUERY BUILDER SERVER
908
KNOWLEDGE BASE
904

FIG. 9